AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-20. (Canceled)

21. (Previously Presented) A method of operating a power supply unit, the method comprising the steps of:

operating a first and a second switch to an "On" position;

operating said first switch to a "Off" position and causing a flow of a first free-wheeling current through a first free-wheeling current path;

measuring a value of said first free-wheeling current;

controlling the switching of said second switch responsive to said value of said first free-wheeling current; and

regulating power from said power supply unit.

22. (Currently Amended) The method of claim 21, further comprising the steps of:

operating said first and said second switch to the "On" position;

operating said second switch to a "Off" position and causing the flow of a second free-wheeling current through a second free-wheeling current path;

measuring a value of said second free-wheeling current; and

controlling the switching of said first switch responsive to said value of said second free-wheeling current.

23. (Currently Amended) The method of claim [[21]] 22, further comprising the steps of:

designating said first free-wheeling current as faulty when the value of said first free-wheeling current is less than a first prescribed threshold value; and

designating said second free-wheeling current as faulty when the value of said second free-wheeling current is less than a second prescribed threshold value.

24. (Previously Presented) The method of claim 23, comprising the step of maintaining said second switch in the "On" position when said first free-wheeling current is faulty.

25. (Previously Presented) The method of claim 23, comprising the step of maintaining said first and said second switch in the "Off" position when said first free-wheeling current is faulty.

26. (Previously Presented) The method of claim 23, comprising the step of maintaining said first switch in the "On" position when said second free-wheeling current is faulty.

27. (Previously Presented) The method of claim 23, comprising the step of maintaining said first and said second switch in the "Off" position when said second free-wheeling current is faulty.

28. (Currently Amended) The method of claim [[21]] 22, further comprising the steps of:
generating a first control signal for operating said second switch; and
generating a second control signal for operating said first switch.

29. (Previously Presented) The method of claim 28, comprising the steps of:
generating said first control signal from a first periodic signal; and
generating said second control signal from a second periodic signal.

30. (Previously Presented) The method of claim 28, comprising the steps of:
generating said first control signal from a first clock signal; and
generating said second control signal from a second clock signal.

31. (Previously Presented) The method of claim 28, comprising the step of synchronizing said first and said second control signals to a clock signal.

32. (Previously Presented) The method of claim 28, further comprising the steps of:
generating said first control signal when said first free-wheeling current is not faulty; and

generating said second control signal when said second free-wheeling current is not faulty.

33. (Previously Presented) The method of claim 21 operating a power electronics circuit.

34. (Previously Presented) The method of claim 33 providing power to said power electronics circuit.

35. (Previously Presented) The method of claim 21 operating an electric motor.

36. (Previously Presented) The method of claim 21 providing power to an inductive converter, said method further comprising the steps of:

operating said first switch between said "On" and said "Off" positions; and

operating said second switch between said "On" and said "Off" positions.

37. (Previously Presented) A power supply unit comprising:

an inductive converter;

a first free-wheeling current path comprising:

a first switch connected in series with said inductive converter, said first switch operable between an "On" position and a "Off" position; and

a first means for measuring a first free-wheeling current flowing through said first free-wheeling current path; and

a second free-wheeling current path comprising:

a second switch connected in series with said inductive converter, said second switch operable between an "On" position and a "Off" position; and

a second means for measuring a second free-wheeling current flowing through said second free-wheeling current path.

38. (Previously Presented) The power supply unit of claim 37, wherein:

said first means for measuring said first free-wheeling current includes a first current sensor; and

said second means for measuring said second free-wheeling current includes a second current sensor.

39. (Previously Presented) The power supply unit of claim 37, further comprising:

a first control circuit measuring said first free-wheeling current and operating said first switch between said "On" and "Off" positions; and

a second control circuit measuring said second free-wheeling current and operating said second switch between said "On" and "Off" positions.

40. (Previously Presented) The power supply unit of claim 39, wherein

said second control circuit receives a first signal from said first control circuit; and

said first control circuit receives a second signal from said second control circuit.

41. (Previously Presented) The power supply unit of claim 40, wherein said first signal is a first periodic or clock signal generated by said first control circuit and wherein said second signal is a second periodic or clock signal generated by said second control circuit.

42. (Previously Presented) The power supply unit of claim 40, wherein said first signal is generated by said first control circuit from a first periodic signal or a clock signal and wherein said second signal is generated by said second control circuit from a second periodic signal or a clock signal.

43. (Previously Presented)The power supply unit of claim 37, configured to operate a power electronics circuit.

44. (Previously Presented) The power supply unit of claim 43, configured to provide power to said power electronics circuit.

45. (Previously Presented) The power supply unit of claim 37, configured to operate an electric motor.

46. (Previously Presented) The power supply unit of claim 37, wherein said inductive converter provides power in response to operating said first switch and said second switch between said "On" and "Off" positions.

47. (Previously Presented) The power supply unit of claim 37, configured to generate

said first free-wheeling current in response to operating said first switch to said "Off" position; and

said second free-wheeling current in response to operating said second switch to said "Off" position.

48. (Previously Presented) The power supply unit of claim 37, wherein said inductive converter is a transformer.

49. (Previously Presented) The power supply unit of claim 37, wherein said first switch does not operate when said first free-wheeling current is less than a first prescribed value.

50. (Previously Presented) The power supply unit of claim 37, wherein said second switch does not operate when said second free-wheeling current is less than a second prescribed value.

51. (Previously Presented) The power supply unit of claim 37, wherein said first free-wheeling current path further comprises a first free-wheeling diode.

52. (Previously Presented) The power supply unit of claim 37, wherein said second free-wheeling current path further comprises a second free-wheeling diode.

53. (Previously Presented) The power supply unit of claim 37, wherein said first switch is a first field effect transistor.

54. (Previously Presented) The power supply unit of claim 37, wherein said second switch is a second field effect transistor.